

WHAT IS CLAIMED IS:

1. A method for providing at least one metric of a performance of a hard disk drive (HDD), comprising:

establishing at least one reference sector and plural target sectors on the
5 HDD, the target sectors in a track being equidistantly spaced around the track;
for each target sector, executing at least one access from the reference
sector;
recording a time associated with each access; and
based at least in part on the times associated with the accesses,
10 generating at least one indication of the performance of the HDD.

2. The method of Claim 1, wherein at least the times are arranged in an ordered data structure from shortest time to longest.

3. The method of Claim 1, wherein plural accesses are executed for each target sector.

15 4. The method of Claim 3, wherein a shortest access time for each target sector among the plural access times for that target sector is designated as the sector access time for the target sector, and the remaining access times for the target sector

are used to determine a probability of achieving the sector access time for that target sector.

5. The method of Claim 4, wherein the access times for a target sector are used to determine at least one of: the probability of losing a disk revolution while accessing a target sector, and the probability of losing a disk revolution while executing at least one of: a read operation, and a write operation, to that target sector.

6. The method of Claim 1, wherein the indication is used to generate a graphical representation of the ordered data structure.

7. The method of Claim 1, wherein the indication is used as an input to a model outputting an average input/output time metric.

8. A system for providing a measure of the performance of a hard disk drive (HDD), comprising:

at least one digital processing apparatus executing logic embodying

method acts comprising:

executing accesses from at least one reference sector to plural target sectors arranged in tracks on the HDD;

for each access, recording an access time;

ordering the access times in a data structure; and
using at least some access times in the data structure to output a
measure of performance of the HDD.

5 9. The system of Claim 9, wherein the target sectors of a track are
equidistantly spaced around the track.

 10. The system of Claim 9, wherein plural accesses are executed for each
target sector, each access having an associated access time.

10 11. The system of Claim 9, wherein a shortest access time for each target
sector among the plural access times for that target sector is designated as the sector
access time for the target sector, and the remaining access times for the target sector
are used to determine a probability of achieving the sector access time for that target
sector.

15 12. The system of Claim 11, wherein the access times for a target sector are
used to determine at least one of: the probability of losing a disk revolution while
accessing the target sector, and the probability of losing a disk revolution while
executing at least one of: a read operation, and a write operation, to the target sector.

13. The system of Claim 9, wherein a graphical representation of the data structure is output.

14. The system of Claim 9, wherein a model is used to receive at least some information representative of access times and outputting an average input/output time metric.

15. A system for providing a measure of the performance of a hard disk drive (HDD), comprising:

at least one digital processing apparatus including:

means for executing at least one access from a single reference sector to plural target sectors on the HDD;

means for determining times associated with at least some respective accesses; and

means for using the times to determine at least one shortest access time and at least one probability of achieving the shortest access time.

16. The system of Claim 15, wherein the digital processing apparatus further comprises:

means for ordering the times in a data structure.

17. The system of Claim 15, wherein the digital processing apparatus further comprises:

means for establishing target sectors in a single data track to be equidistantally spaced around the track.

5 18. The system of Claim 15, wherein plural accesses are executed by the digital processing apparatus for each target sector, each access having an associated access time.

10 19. The system of Claim 16, comprising means for designating a shortest access time for each target sector among the plural access times for that target sector as the sector access time for the target sector, and means for using the remaining access times for the target sector to determine a probability of achieving the sector access time for that target sector.

15 20. The system of Claim 19, comprising means for using the access times for a target sector to determine at least one of: the probability of losing a disk revolution while accessing the target sector, and the probability of losing a disk revolution while executing at least one of: a read operation, and a write operation, to the target sector.

21. The system of Claim 15, comprising means for outputting a graphical representation of the data structure.